REMARKS/ARGUMENTS

This is in response to the Non-Final Office Action dated December 27, 2007. Claims 1-21 have been canceled, without prejudice. Claims 22, 25, 36 and 37 have been amended. No new matter has been added. Claims 22-44 remain pending in this application with claims 22 and 36 being the only independent claims. Reconsideration is respectfully requested.

Claims 22-44 are rejected under 35 U.S.C. §102(e) as anticipated by Wang et al. (U.S. Patent No.: 6,996,550).

Independent Claim 22

In the outstanding Office Action the Examiner disregards Applicant's basis for overcoming the prior art of record on the grounds that the arguments are based on limitations not found in the claimed invention. Applicant's previous argument read as follows:

"Nowhere does Wang et al. teach or suggest generating evaluation data at a meta layer module based on the meta layer module's evaluation of experimentally determined experiment result data, which constitutes prior experimentation knowledge, and then using the evaluation data to influence (tune) optimization processing of the experimentally determined experiment result data at the optimizer, as required by claim 22." (Amendment dated September 25, 2007: P. 8, l. 20 through P. 9, l. 2)

In rejecting this argument the Examiner specifically states that Applicant's argument that the term "experimentally determined experiment result data" "constitutes prior experimentation knowledge" is not a limitation found in claim 22. (December 27, 2007 Non-Final Office Action: p. 15, ll. 8-11) Claim 22 has been amended for clarification and thus Applicant submits the amended claim is now patentable over the prior art of record for the reasons provided below and in previous amendments.

Specifically, claim 22 has been amended in step b) to read "inputting to at least one meta layer module experimentally determined experiment result data of the first experiment generated in the experimental space, wherein the experimentally determined experiment result data of the first experiment comprises knowledge obtained while the experiment is performed." (emphasis

added) Support for this amended language is found in paragraph [0037] of the clean version of the specification. Thus, the claimed "experimentally determined experiment result data of the first experiment" received as input to the metal layer module is "generated in the experimental space" and is defined as "knowledge obtained while the experiment is performed", i.e., prior experimentation knowledge.

In contrast, Wang et al. fails to disclose or suggest "a meta layer module" that receives as input "experimentally determined experiment result data of the first experiment" defined as "knowledge obtained while the experiment is performed." Instead, Wang et al. discloses the steps of "providing a set of parameters and a set of constraints including one or more experimental constraints representing limitations on operations that can be performed with the set of resources, generating a plurality of configurations based on the parameters and the experimental constraints, selecting a configuration from the plurality of configurations, and defining a set of experiments based on the selected configuration. The parameters include a plurality of factors to be varied in a set of experiments and represent axes defining a parameter space. Each configuration includes a plurality of experimental points. Each point has a set of values for the parameters." (Col. 4, ll. 47-58) In contrast to Wang et al., the meta layer module as required by claim 22 evaluates knowledge obtained while the experiment is performed, in other words, experimentally determined experiment result data. The experimentally determined experiment result data required by claim 22 is not concerned with either a constraint nor a parameter as disclosed in Wang et al., but rather the results of the experiment itself.

Claim 22 is further distinguishable over the prior art or record in that it specifies in step c) "evaluating the experimentally determined experiment result data of the first experiment at the meta layer module, wherein the meta layer module generates evaluation data based on the evaluating of the experimentally determined experiment result data; and wherein the evaluation data includes rules generated by performing data analysis on the experimentally determined experiment result data." (emphasis added) Therefore, the evaluating functionality performed by the meta layer module comprises performing data analysis on the experimentally determined experiment result data (representing knowledge obtained while the experiment is performed) and deriving therefrom rules (evaluation data). Wang et al. neither discloses nor suggest a "meta layer module" in which data analysis is performed on such experimentally determined

experiment result data to generate rules.

Lastly, step d) of claim 22 requires "processing the experimentally determined experiment result data of the first experiment at the optimizer, wherein the processing at the optimizer is influenced by the evaluation data and wherein the optimizer generates experiment design data based on the processing of the experimentally determined experiment result data." Wang et al. fails to disclose or suggest using rules (evaluation data) to influence (tune) optimization processing of the experimentally determined experiment result data at the optimizer, wherein the rules (evaluation data) are generated by the meta layer module when performing data analysis on the experimentally determined experiment result data representing knowledge obtained while the experiment is performed, as found in claim 22.

Applicant therefore submits that claim 22 is patentable over the prior art of record for at least these reasons.

Dependent Claim 25

Claim 25 further specifies "wherein the meta layer module contains at least one of a neural network module, a hybrid model module, a rigorous model module and a data mining module used as the data analysis to generate the rules." Support for this amendment is found in paragraph [0044] of the clean version of the specification. In rejecting this claim "[t]he Examiner takes the position that data mining is inherent in the process of optimization." (December 27, 2007 Non-Final Office Action: p. 6, ll. 4-5) Applicant disagrees that data mining is an inherent process of an optimizer and pursuant to MPEP section 2144.03(C) requests that the Examiner provide a prior art reference establishing that data mining is a process performed by the optimizer. Even assuming, *arguendo*, that such a reference is provided, Applicant further distinguishes the present claimed invention which expressly calls for the "meta layer module" to generate rules by performing data analysis on the experimentally determined experiment result data comprising knowledge obtained while the experiment is performed (as set forth in claim 22) using at least one of the specified data analysis methods, e.g., a neural network module, a hybrid model module, a rigorous model module, and a data mining module. As discussed above with respect to claim 22 from which claim 25 depends, the present claimed invention specifies that the meta layer module evaluates knowledge obtained while the experiment is performed, in other

words, experimentally determined experiment result data, rather than a constraint or a parameter as disclosed in Wang et al.

Furthermore, claim 25 calls for the generated rules (evaluation data), in turn, to be used to influence the optimizer ("wherein the processing at the optimizer is influenced by the evaluation data and wherein the optimizer generates experiment design data based on the processing of the experimentally determined experiment result data", as set forth in limitation d) of claim 22 from which claim 25 depends). The Examiner has failed to provide a prior art reference that specifically teaches such generated rules (evaluation data) produced by the meta layer module are, in turn, used to influence the optimizer ("wherein the processing at the optimizer is influenced by the evaluation data and wherein the optimizer generates experiment design data based on the processing of the experimentally determined experiment result data.")

Independent Claim 36

Claim 36 is the system counterpart of independent method claim 22. Accordingly, claim 36 contains similar limitations to those previously discussed above with respect to claim 22. Applicant therefore submits that independent claim 36 is patentable over the prior art of record for at least the same reasons discussed above with respect to claim 22.

Dependent Claim 37

Claim 37 is the system counterpart of method claim 25. Accordingly, claim 37 contains similar limitations to those previously discussed above with respect to claim 25. Applicant therefore submits that claim 37 is patentable over the prior art of record for at least the same reasons discussed above with respect to claim 25.

For the foregoing reasons Applicant submits that claims 22-44 are patentable over the prior art of record and passage of the application to issuance is requested.

CONDITIONAL PETITION FOR EXTENSION OF TIME

If entry and consideration of the amendments above requires an extension of time, Applicants respectfully request that this be considered a petition therefor. The Assistant Commissioner is authorized to charge any fee(s) due in this connection to Deposit Account No. 14-1263.

ADDITIONAL FEE

Please charge any insufficiency of fees, or credit any excess, to Deposit Account No. 14-1263.

Respectfully submitted,

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By _____

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